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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|-------------------------|------------------|
| 09/685,654 | 10/10/2000 | Lin He | SP00-290 | 3897 |
| 22928 | 7590 | 06/24/2004 | EXAMINER | |
| CORNING INCORPORATED SP-TI-3-1 CORNING, NY 14831 | | | ILDEBRANDO, CHRISTINA A | |
| | | ART UNIT | PAPER NUMBER | 1725 |

DATE MAILED: 06/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|------------------------|---------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 09/685,654 | HE ET AL. |
| | Examiner | Art Unit |
| | Christina Ildebrando | 1725 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
 THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 25 May 2004.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-21 and 33-62 is/are pending in the application.
- 4a) Of the above claim(s) 1-16 and 33-62 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 17-21 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group II and species 1 in the reply filed on May 25, 2004 is acknowledged. Currently claims 17-21 are pending.
2. Claims 1-16 and 33-62 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention and/or species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on May 25, 2004.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 17-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Lauder.

Lauder (US 4,049,583) discloses a catalyst composition useful in the oxidation-reduction purification of exhaust gases from internal combustion engines (column 1, lines 15-22). The catalyst composition comprises a perovskite having the formula:



wherein A1 and A2 are each one or more metals having ionic radii between about 0.8 and 1.65 angstroms, B' is one or more platinum group metals, Me is one or more of the platinum metals ruthenium, osmium, rhodium, iridium, palladium, and

platinum, x is between 0.05 and 0.95 and y is between 0.01 and 0.20 (column 4, lines 15-40). Suitable type A metals include rare earth metals such as lanthanum and suitable B' metals include transition metals such as manganese (columns 5-6). It is taught that the composition may form a coating on a suitable support substrate (column 12, lines 35-50).

The catalyst is taught as suitable for use in a catalytic converter in an internal combustion engine which runs on gasoline fuel (columns 13-15). The reference does not specifically disclose that such an engine has a fuel injector; however, it is the position of the examiner that such an engine would inherently have a fuel injector. When the examiner has reason to believe that the functional language asserted to be critical for establishing novelty in claimed subject matter may in fact be an inherent characteristic of the prior art, the burden of proof is shifted to Applicants to prove that the subject matter shown in the prior art does not possess the characteristics relied upon. *In re Fitzgerald et al.* 205 USPQ 594.

As each and every element of the claimed invention is taught in the prior art as recited above, the claims are anticipated by Lauder.

5. Claims 17-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Volin.

Volin (US 4,134,852) discloses a catalyst composition useful in auto exhaust purification (column 1, line 60). The catalyst composition comprises a perovskite of formula ABO_3 (column 5, lines 20-50). An example of a suitable composition is $\text{Sr}_{0.2}\text{La}_{0.8}\text{Mn}_{0.9}\text{Ru}_{0.1}\text{O}_3$ (column 6, Table 1), which meets the perovskite composition

claimed. The reference teaches that the composition may be coated on a substrate (column 11, lines 5-17).

Volin teaches that the catalyst composition may be employed in a catalytic converter of an internal combustion engine as a three way catalyst (column 5, lines 55-65 and column 11, Example II). The reference does not specifically disclose that such an engine has a fuel injector; however, it is the position of the examiner that such an engine would inherently have a fuel injector. When the examiner has reason to believe that the functional language asserted to be critical for establishing novelty in claimed subject matter may in fact be an inherent characteristic of the prior art, the burden of proof is shifted to Applicants to prove that the subject matter shown in the prior art does not possess the characteristics relied upon. *In re Fitzgerald et al.* 205 USPQ 594.

As each and every element of the claimed invention is taught in the prior art as recited above, the claims are anticipated by Volin.

6. Claims 17-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Takase et al.

Takase et al. (US 4,186,691) discloses an exhaust gas purification system. The system comprises a catalytic reactor which contains a catalytic substance and inlets and outlets and a fuel injector upstream of the catalytic reactor (column 2, lines 10-37 and Figure 1).

As each and every element of the claimed invention is taught in the prior art as recited above, the claims are anticipated by Takase et al.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

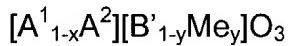
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takase et al. as applied above for claims 17-19 and further in view of Lauder or Volin.

The teachings of Takase et al. are applied as described above for claims 17-19.

The difference between the reference and the claims is that the reference does not disclose the particular catalyst required by claims 20-21.

Lauder (US 4,049,583) discloses a catalyst composition useful in the oxidation-reduction purification of exhaust gases from internal combustion engines (column 1, lines 15-22). The catalyst composition comprises a perovskite having the formula:



wherein A1 and A2 are each one or more metals having ionic radii between about 0.8 and 1.65 angstroms, B' is one or more platinum group metals, Me is one or more of the platinum metals ruthenium, osmium, rhodium, iridium, palladium, and platinum, x is between 0.05 and 0.95 and y is between 0.01 and 0.20 (column 4, lines 15-40). Suitable type A metals include rare earth metals such as lanthanum and suitable B' metals include transition metals such as manganese (columns 5-6). It is taught that the composition may form a coating on a suitable support substrate (column

12, lines 35-50). The catalyst is taught as suitable for use in a catalytic converter in an internal combustion engine which runs on gasoline fuel (columns 13-15).

Volin (US 4,134,852) discloses a catalyst composition useful in auto exhaust purification (column 1, line 60). The catalyst composition comprises a perovskite of formula ABO_3 (column 5, lines 20-50). An example of a suitable composition is $\text{Sr}_{0.2}\text{La}_{0.8}\text{Mn}_{0.9}\text{Ru}_{0.1}\text{O}_3$ (column 6, Table 1), which meets the perovskite composition claimed. The reference teaches that the composition may be coated on a substrate (column 11, lines 5-17). Volin teaches that the catalyst composition may be employed in a catalytic converter of an internal combustion engine as a three way catalyst (column 5, lines 55-65 and column 11, Example II).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the system taught by Takase et al. to include the catalyst compositions taught by either Lauder or Volin. One of ordinary skill would have been motivated to do so, with a reasonable expectation of success, in light of the teachings by the secondary references that the catalyst compositions accomplished the function desired by the primary reference, i.e. the purification of nitrogen oxides from internal combustion engines.

Conclusion

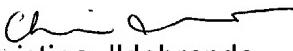
9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christina Ildebrando whose telephone number is (571)

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272-1176. The examiner can normally be reached on Monday-Friday, 7:30-5, with Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Christina Ildebrando
Patent Examiner
Art Unit 1725

6/22/04

CAI
June 22, 2004